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WO 2004/096116 A3

(54) Title: DIAZABICYCLONONENE DERIVATIVES

(57) Abstract: The invention relates to novel 3,9-diazabicyclo[3.3.1]nonene derivatives and related compounds and their use as active ingredients in the preparation of pharmaceutical compositions. The invention also concerns related aspects including processes for the preparation of the compounds, pharmaceutical compositions containing one or more of those compounds and especially their use as inhibitors of renin.

## INTERNATIONAL SEARCH REPORT

|                   |                |
|-------------------|----------------|
| Internat          | Application No |
| PCT/EP2004/004372 |                |

|                                     |            |             |           |
|-------------------------------------|------------|-------------|-----------|
| A. CLASSIFICATION OF SUBJECT MATTER |            |             |           |
| IPC 7                               | C07D471/08 | A61K31/4995 | A61P13/12 |
|                                     |            |             | A61P9/12  |

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| According to International Patent Classification (IPC) or to both national classification and IPC |
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| B. FIELDS SEARCHED |
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| Minimum documentation searched (classification system followed by classification symbols) |
| IPC 7 C07D  |

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| Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched |
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| Electronic data base consulted during the international search (name of data base and, where practical, search terms used) |
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| EPO-Internal, CHEM ABS Data |
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| C. DOCUMENTS CONSIDERED TO BE RELEVANT |
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| Category * | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |
|------------|---|-----------------------|
| A          | WO 97/09311 A (HOFFMANN LA ROCHE)<br>13 March 1997 (1997-03-13)<br>cited in the application<br>claims 1,24,24<br>-----<br>US 3 509 161 A (DOLD OTTO ET AL)<br>28 April 1970 (1970-04-28)<br>column 2, line 49 - line 61; examples;<br>table<br>-----<br>-/- | 1,9-11                |
| A          |   | 1,9-11                |

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|-------------------------------------|--|
| <input checked="" type="checkbox"/> | Further documents are listed in the continuation of box C. |
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| <input checked="" type="checkbox"/> | Patent family members are listed in annex. |
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\* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
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- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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| Date of the actual completion of the international search | Date of mailing of the international search report |
|---|--|

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| 9 December 2004 | 17/12/2004 |
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| Name and mailing address of the ISA<br>European Patent Office, P.B. 5818 Patentlaan 2<br>NL - 2280 HV Rijswijk<br>Tel (+31-70) 340-2040, Tx. 31-651 epo nl,<br>Fax: (+31-70) 340-3016 | Authorized officer |
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| Hass, C |
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## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/EP2004/004372

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |
|------------|---|-----------------------|
| A          | EL-ABBADY S A ET AL: "ENHANCED REACTIVITY OF PYRIDIN-3-OL TOWARDS 4-PHENYL-1,2,4-TRIAZOLINE 3,5-DIONE: FMO TREATMENT OF THE CYCLOADDITION PROCESS BY ASED-MO CALCULATIONS METHOD"<br>ZAGAZIG JOURNAL OF PHARMACEUTICAL SCIENCES, FACULTY OF PHARMACY ZAGAZIG UNIVERSITY, CAIRO, EG,<br>vol. 5, no. 1, June 1996 (1996-06), pages 68-74, XP001154254<br>ISSN: 1110-5089<br>scheme 1, compounds (4) and (5) | 1                     |
| A,P        | WO 03/093267 A (REMEN LUBOS ; WELLER THOMAS (CH); BUR DANIEL (CH); FISCHLI WALTER (CH)) 13 November 2003 (2003-11-13)<br>cited in the application<br>claims 1,9-12  | 1,9-12                |
| A,P        | WO 2004/002957 A (REMEN LUBOS ; WELLER THOMAS (CH); BUR DANIEL (CH); FISCHLI WALTER (CH)) 8 January 2004 (2004-01-08)<br>cited in the application<br>claims 1,7-10  | 1,9-12                |

## INTERNATIONAL SEARCH REPORT

Intern'l application No.  
PCT/EP2004/004372

### Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:  

Although claims 10-12 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2.  Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3.  Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

#### Remark on Protest

- The additional search fees were accompanied by the applicant's protest.  
 No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

|                   |                |
|-------------------|----------------|
| International     | Application No |
| PCT/EP2004/004372 |                |

| Patent document cited in search report | Publication date | Patent family member(s)  |    | Publication date   |
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| WO 9709311                             | A 13-03-1997     | AT 242213 T<br>AU 708616 B2<br>AU 6743296 A<br>BR 9610385 A<br>CA 2230931 A1<br>CN 1202152 A<br>CZ 9800684 A3<br>DE 59610509 D1<br>DK 863875 T3<br>WO 9709311 A1<br>EP 0863875 A1<br>ES 2201192 T3<br>HU 9900926 A2<br>IL 123293 A<br>JP 11500447 T<br>MA 23967 A1<br>NO 980954 A<br>NZ 315677 A<br>PL 325425 A1<br>PT 863875 T<br>RU 2167865 C2<br>TR 9800409 T1<br>TW 474932 B<br>US 6051712 A<br>US 6150526 A<br>ZA 9607424 A |    | 15-06-2003<br>05-08-1999<br>27-03-1997<br>06-07-1999<br>13-03-1997<br>16-12-1998<br>14-10-1998<br>10-07-2003<br>01-12-2003<br>13-03-1997<br>16-09-1998<br>16-03-2004<br>28-09-1999<br>24-06-2003<br>12-01-1999<br>01-04-1997<br>28-04-1998<br>28-02-2000<br>20-07-1998<br>31-10-2003<br>27-05-2001<br>21-05-1998<br>01-02-2002<br>18-04-2000<br>21-11-2000<br>07-03-1997 |
| US 3509161                             | A 28-04-1970     | NONE   |    |  |
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| WO 2004002957                          | A 08-01-2004     | WO 2004002957  | A1 | 08-01-2004   |

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